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PILLSBURY WINTHROP SHAW PITTMAN, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/940,577

Filing Date: August 29, 2001

Appellant(s): SOININEN ET AL.

Christophe F. Lair
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/19/2006 appealing from the Office action mailed 11/25/2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,195,705

LEUNG

2-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Leung, US Patent Number 6,195,705.
3. Referring to claim 1, Leung has taught a method of providing macro mobility management for a mobile node in an access system (Col 4 lines 17-28), comprising a plurality of mobile nodes (figure 2b items 6 and 27), a first and a second access node (items 206 and 204) serving said mobile nodes within the first and second parts of the access system (items 214 and 216), respectively, at least one first gateway node (item R1) for interfacing said first part of the access system with external networks (R1 connects 206 to Internet 4), and a first mobility entity (item 202) which is associated with said at least one first gateway node and arranged to provide macro mobility management routing

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services to the mobile nodes while registered to the first part of the access system, said method comprising:

- a. establishing a session between one of said plurality of mobile nodes and a second party via said first access node and said first mobility entity (see figure 2B, a session is established between item 202 and item 10 via tem 206, and Col 3 line 64- Col 4 line 16; Col 1 lines 38-42);
 - b. checking whether there is at least one second mobility entity (item 208) to which the first access node can establish a connection as an alternative (standby Mobile) for the first mobility entity and which is more preferred for the first access node in respect of routing than said first mobility entity (item 202)(Col 4 lines 27-39); and
 - c. reacting said checking by
 - i. maintaining a connection from said first access node to said first mobility entity if there is no second mobility entity which is more preferred than said first one (Col 4 lines 27-39, since the second mobility is a standby agent, the connection would be maintained if the original is operating normally);
 - ii. opening a connection from said first access node to said second mobility entity if said more preferred second mobility entity is available, and initiating macro mobility management registration (Col 4 lines 34-49).
4. Referring to claim 2, Leung has further taught rerouting the session via said second access node in response to a movement of said one of mobile nodes to said second part pf the access system (Col 4 lines 34-39).

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5. Referring to claim 3, Leung has further taught closing the connection from said first access node to said first mobility entity when said more preferred second mobility entity is available (Col 4 lines 34-39).
6. Referring to claim 4, Leung has further taught wherein said macro mobility management is Internet Protocol-type, or IP-type mobility management (Col 4 line 9, Col 6 line 9 and Col 7 lines 7-9), and wherein an agent advertisement message is sent from said second mobility entity to said one mobile node over said new connection, said agent advertisement message enabling said one mobile node to detect a change of attachment point and to initiate mobile IP registration (Col 4 lines 34-54).
7. Referring to claims 10, 21-22, 35, claims 10, 21-22, 35 encompass the same scope of the invention as that of the claims 1-4. Therefore, claims 10, 21-22, 35 are rejected for the same reason as the claims 1-4.

(10) Response to Argument

Argument:

(a) Claim 1

1. Home agents 204 and 206 cannot correspond, in any way, to different access nodes of an access system.
2. Virtual Home Agent HAV1 202 and Home Agent HA1 206 do not correspond to two separate network entity, and virtual Home Agent HAV1 202 is not a first mobility entity.

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3. Leung fails to disclose, teach or suggest “establishing a session between one of the plurality of mobile nodes and a second party via the first access node and the first mobility entity.”
4. Leung fails to disclose, teach or suggest checking whether there is at least one second mobility entity to which the first access node can establish a connection as an alternative to the first mobility entity and which is more preferred for the first access node in respect of routing than said first mobility entity.
5. Leung fails to disclose, teach or suggest reacting said checking by (A) maintaining a connection from said first access node to said first mobility entity if there is no second mobility entity which is more preferred than said first one, and (B) opening a connection from said first access node to said second mobility entity if said more preferred second mobility entity is available, and initiating macro mobility management registration.

(b) Claim 2

6. Leung does not disclose, teach or suggest the features of rerouting a session in response to a movement of the mobile node, as recited in claim 2.

(c) Claim 3

7. There are no teachings or suggestions anywhere in Leung as to closing a connection from the Home Agent HA1 206 to the virtual Home Agent HA1 202 when virtual Home Agent HAV2 208 is available.

(d) Claim 4

8. There is no indications in the cited portion of Leung, nor anywhere else in Leung ,
that an agent advertisement message is sent from the second mobility entity to the
mobile node 6 over the new connection.

(e) Claim 10

9. Appellant argues claim 10 is patentable over Leung for at least similar reasons as
provided above with claim 1.

(f) Claim 21

10. Appellant argues claim 21 is patentable over Leung for at least similar reasons as
provided above with claim 1. And Leung does not disclose, teach or suggest a
second gateway node, nor does Leung discloses a second router connected to the
virtual Home Agent HAV2 208.

(g) Claim 22

11. There are no teachings or suggestions anywhere in Leung as to closing a
connection from the Home Agent HA1 206 to the virtual Home Agent HA1 202
when virtual Home Agent HAV2 208 is available.

(h) Claim 35

12. Appellant argues claim 35 is patentable over Leung for at least similar reasons as
provided above with claim 1. And Leung does not disclose, teach or suggest a
second gateway node, nor does Leung discloses a second router connected to the
virtual Home Agent HAV2 208

Response

(a) Claim 1

1. Home agents 204 and 206 are active routers located in an access system disclosed in figure 2B of Leung (Col 8 lines 60-67, home agent is normally the active router). Active router is an intermediary device on a communication network, which corresponds to the access node in the claimed invention. And home agents 204 and 206 are different access nodes of an access system (figure 2 B).
2. The Appellant argues that HAV1 202 is not a network entity because HAV1 is not a physical router. The Examiner disagrees because HAV1 202 is an unit designed as a virtual home agent in figure 2B. HAV1 is a virtual node does not conclude it's neither a network entity nor a mobility entity. According to the definition provided in Microsoft Computer Dictionary Fourth Edition, "entity: in computer-aided design and object oriented design, an item that can be treated as a unit, or often, as a member of a particular category or type." Therefore, Virtual Home Agent HAV1 202 and Home Agent HA1 206 do not corresponds to two separate network entity because HAV1 202 and HA1 206 are separate units designed for the system in figure 2B.
3. Leung teaches a Mobile IP environment includes the Internet over which a Mobile Node 6 can communicate remotely via mediation by a Home Agent 8 and a Foreign Agent 10 (Col 1 lines 38-42). Therefore, Leung teaches or establishing a session between one of the plurality of mobile nodes (node 6 is one of the plurality of mobile nodes (Col 6 lines 50-56) and a second party (second party

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could be either PC 16, Foreign Agent 10, or Corresponding node 18; however, Mobile Node 6 is communicating with a second party as disclosed in Col 1 lines 34-48), via the first access node (HA1) and the first mobility entity (HAV1)(figure 2B for Mobile Node 6 to communicate with a remote node, HA1 and HAV1 are needed to route the message to the Internet.)

4. Appellant argues Leung fails to teach or suggest an alternative connection between the Home Agent HA1 206 and the virtual Home Agent HAV2 208 in the event this connection is more preferred than the connection between the Home Agent HA1 206 and the virtual Home Agent HAV1 202. However, the claimed limitation recites, “checking whether there is at least one second mobility entity to which the first access node can establish a connection as an alternative for the first mobility entity...” the examiner interprets the claim as “determining, checking, or identifying if there is a second mobility entity that would act as an alternative or backup for the first mobility entity to the first access node.” Leung teaches HA2 and HAV2 are the standby agents for HA1 and HAV1 (Col 8 lines 51-59), so when HA1 and HAV1 fail for the group 214, HA2 and HAV2 would assume the role of Home Agent for group 214 (Col 8 lines 55-58; Col 4 lines 27-39). HAV2 in this case are determined to be the second mobility entity that acts as an alternative for the first mobility (HAV1) to the first access node (HA1). Leung therefore teaches checking (Col 4 lines 28-30) whether there is at least one second mobility entity to which the first access node can establish a connection as an

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alternative to the first mobility entity and which is more preferred for the first access node in respect of routing than said first mobility entity.

5. Appellant argues Leung fails to disclose, teach or suggest checking a more preferred connection between an access node and a second mobility entity to providing backup Home Agent when the active Home Agent fails. The Examiner does not agree, Leung teaches if active Home Agent 206 fails, then standby Home Agent 204 would assume the role of active Home Agent (Col 8 lines 51-59).

Which is, if HA1 and HAV1 fails for group 214, then HA2 and HAV2 will be the backup Home Agent for group 214 (see figure 2B), so HA2 and HAV2 would be the more preferred connection between an access node and a second mobility entity to provide backup Home Agent when the active Home Agent fails.

Appellant also argues Leung clearly fails to teach or suggest opening a new connection from the first access node to the second mobility entity if the more preferred second mobility entity is available, and initiating macro mobility management registration. The Examiner does not agree, Leung teaches HAV2 and HA2 could replace HAV1 and HA1 when HA1 and HAV1 fails, so when HA1 fails, a new connection is established from the old connection of HA1 to the new connection of HA2 and HAV2, and initiating macro mobility management registration (Col 4 lines 17-39).

(b) Claim 2

6. Leung teaches when HA1 fails, standby HA2 will assumes active role of Home Agent for group 214 (Col 8 lines 44-59, and figure 2B). For instance, mobile

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node 6 is originally communicating with the network via the communication session established by HA1, and when HA1 fails, HA2 will take over and mobile node 6 will then communicating with the network via the communication session established by HA2. The cause to change of communication session of mobile node 6 corresponds to the movement of the mobile node, and change of communication session from HA1 to HA2 corresponds to rerouting a session.

(c) Claim 3

7. Leung teaches when HA1 fails, standby HA2 will assumes active role of Home Agent for group 214 (Col 8 lines 44-59, and figure 2B). When HA1 fails, the connection is considered "closed".

(d) Claim 4

8. Leung teaches in Col 2 lines 20-44, that an agent advertisement message is sent from the second mobility entity to the mobile node 6 over the new connection (messages from corresponding node 18, is sent to mobile node via home agent).

(e) Claim 10

9. The Examiner responds claim 10 is not patentable over Leung for the same reasons as provided above with claim 1.

(f) Claim 21

10. The Examiner responds claim 21 is not patentable over Leung for the same reasons as provided above with claim 1. And Leung teaches in Col 1 lines 59-63, that Home Agents may be connected through one or more other router with the Internet.

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(g) Claim 22

11. Leung teaches when HA1 fails, standby HA2 will assumes active role of Home Agent for group 214 (Col 8 lines 44-59, and figure 2B). When HA1 fails, the connection is considered "closed".

(h) Claim 35

12. The Examiner responds claim 35 is not patentable over Leung for the same reasons as provided above with claim 1. And Leung teaches in Col 1 lines 59-63, that Home Agents may be connected through one or more other router with the Internet.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


Liangche Alex Wang 


SALEH NAJJAR
SUPERVISORY PATENT EXAMINER


September 26, 2006

Conferees:

Saleh Najjar


SALEH NAJJAR
SUPERVISORY PATENT EXAMINER

Ario Etienne


ARIO ETIENNE
SUPERVISORY PATENT EXAMINER
SEP 27 2006